

Creating a Security Events Table

In this tutorial, you will create a MySQL table to store security event data imported from a JSON file.

The JSON file contains homes, devices and events. Rather than storing the entire JSON structure, each event will be stored as a separate row in a database table.

This approach makes it easier to search, filter and analyse the data using SQL.

Open phpMyAdmin

Open phpMyAdmin in your browser.

Example:

<http://localhost/phpmyadmin/>

Select your existing database:

project_db

Create the Security Events Table

Select the **SQL** tab and run:

```
CREATE TABLE security_events (  
  
    event_id INT AUTO_INCREMENT PRIMARY KEY,  
  
    device_id VARCHAR(50) NOT NULL,  
  
    device_type VARCHAR(100) NOT NULL,
```

```
room VARCHAR(100) NOT NULL,

event_timestamp DATETIME NOT NULL,

event_type VARCHAR(100) NOT NULL,

data_transmitted VARCHAR(100) NOT NULL,

severity VARCHAR(20) NOT NULL,

access_result VARCHAR(20) NOT NULL

);
```

This creates a table capable of storing all event information from the JSON file.

Review the Table Structure

The completed table should contain the following fields:

Field	Purpose
event_id	Unique identifier for each event
device_id	Device that generated the event
device_type	Type of device
room	Location of the device
event_timestamp	Date and time of the event
event_type	Type of activity
data_transmitted	Data involved in the event
severity	Event severity level
access_result	Result of the event

View the Table Structure

Run:

```
DESCRIBE security_events;
```

You should see a structure similar to:

Field	Type
event_id	int
device_id	varchar(50)
device_type	varchar(100)
room	varchar(100)
event_timestamp	datetime
event_type	varchar(100)
data_transmitted	varchar(100)
severity	varchar(20)
access_result	varchar(20)

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	event_id 	int(11)			No	None		AUTO_INCREMENT	 Change  Drop  More
☐	2	device_id	varchar(50)	utf8mb4_general_ci		No	None			 Change  Drop  More
☐	3	device_type	varchar(100)	utf8mb4_general_ci		No	None			 Change  Drop  More
☐	4	room	varchar(100)	utf8mb4_general_ci		No	None			 Change  Drop  More
☐	5	event_timestamp	datetime			No	None			 Change  Drop  More
☐	6	event_type	varchar(100)	utf8mb4_general_ci		No	None			 Change  Drop  More
☐	7	data_transmitted	varchar(100)	utf8mb4_general_ci		No	None			 Change  Drop  More
☐	8	severity	varchar(20)	utf8mb4_general_ci		No	None			 Change  Drop  More
☐	9	access_result	varchar(20)	utf8mb4_general_ci		No	None			 Change  Drop  More

Insert a Test Record

Before importing JSON data, insert a test record to verify the table works correctly.

Run:

```
INSERT INTO security_events (  
  
    device_id,  
    device_type,  
    room,
```

```
event_timestamp,  
event_type,  
data_transmitted,  
severity,  
access_result  
  
)  
VALUES (  
  
    'CAM-01',  
    'Security Camera',  
    'Front Entrance',  
    '2026-03-14 02:18:45',  
    'motion_detected',  
    'video_stream',  
    'high',  
    'authorised'  
  
);
```

If successful, MySQL will report:

1 row inserted

✓ 1 row inserted.

Inserted row id: 1 (Query took 0.0014 seconds.)

```
INSERT INTO security_events ( device_id, device_type, room, event_timestamp, event  
14 02:18:45', 'motion_detected', 'video_stream', 'high', 'authorised' );
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

View the Data

Run:

```
SELECT * FROM security_events;
```

You should see:

event_id	device_id	device_type	room	event_timestamp	event_type	severity
1	CAM-01	Security Camera	Front Entrance	2026-03-14 02:18:45	motion_detected	high

Delete the Test Record

The test record is no longer required.

Run:

```
DELETE FROM security_events;
```

Verify the table is empty:

```
SELECT * FROM security_events;
```

You should see:

```
Empty set
```

Complete SQL Script

```
CREATE TABLE security_events (  
  
    event_id INT AUTO_INCREMENT PRIMARY KEY,  
  
    device_id VARCHAR(50) NOT NULL,  
  
    device_type VARCHAR(100) NOT NULL,  
  
    room VARCHAR(100) NOT NULL,  
  
    event_timestamp DATETIME NOT NULL,  
  
    event_type VARCHAR(100) NOT NULL,
```

```
data_transmitted VARCHAR(100) NOT NULL,  
  
severity VARCHAR(20) NOT NULL,  
  
access_result VARCHAR(20) NOT NULL  
  
);  
  
INSERT INTO security_events (  
  
    device_id,  
    device_type,  
    room,  
    event_timestamp,  
    event_type,  
    data_transmitted,  
    severity,  
    access_result  
  
)  
VALUES (  
  
    'CAM-01',  
    'Security Camera',  
    'Front Entrance',  
    '2026-03-14 02:18:45',  
    'motion_detected',  
    'video_stream',  
    'high',  
    'authorised'  
  
);  
  
SELECT * FROM security_events;  
  
DELETE FROM security_events;
```

You now have a database table ready to receive event data from a JSON file.

Next tutorial: **Importing JSON into MySQL with PHP.**

Revision #1

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